

**REMARKS**

Applicants acknowledge with appreciation that the Examiner has allowed claims 1-3 and 5-13, and indicates that claim 4 would be allowable if rewritten to overcome the indefiniteness rejection. Applicants are amending claims 1, 3, 7, and 13. Therefore, claims 1-13 currently are pending in the above-captioned patent application and are subject to examination. Reconsideration of the above-captioned patent application is respectfully requested in view of the foregoing amendments and the following remarks.

In the Office Action mailed April 26, 2004, the Examiner objected to the drawings as allegedly including informalities. Applicants have amended Figures 7, 9, 13, and 18 in accordance with the Examiner's suggestions. Therefore, Applicants respectfully request that the Examiner withdraw the objections to the drawings.

In the Office Action mailed April 26, 2004, the Examiner objected to the specification as including minor typographical errors. Applicants have amended page 9, line 9; page 35, line 21; and page 37, line 6 in accordance with the Examiner's suggestions to correct these typographical errors. The Examiner also objected to the specification because the phrase: "the above-mentioned problems" at page 3, lines 6 and 7 allegedly lacks antecedent basis. Applicants have amended the last full paragraph on page 2 of the application to provide antecedent basis for the phrase: "the above-mentioned problems." Moreover, the Examiner objected to the Background of the Invention under 37 C.F.R. § 1.71(b) and (c), as allegedly failing to include a description of the parts of the invention to which the improvement relates, and/or a description of the precise invention in such a manner as to distinguish it from other inventions and from what is old. See, e.g., Office Action, Page 3, Lines 1-6. Applicants note that the

requirements of 37 C.F.R. 1.71 relate to the specification as a whole, and Applicants submit that Applicants' specification as a whole includes a description of the parts of the invention to which the improvement relates, and/or a description of the precise invention in such a manner as to distinguish it from other inventions and from what is old. Moreover, the Background of the Invention section of a patent application merely includes a description of what is known in the art, and as such, should not include any description of the parts of Applicants' invention which distinguish it from what already is known/old in the art. In the above-captioned patent application, such a description properly is included in the Summary of the Invention and the Description of Preferred Embodiments. Therefore, Applicants respectfully request that the Examiner withdraw the objections to the specification.

In the Office Action mailed April 26, 2004, the Examiner objected to claims 1, 3, 7 and 13 for including informalities. Specifically, the Examiner indicates that in claim 1 on line 16, and in claim 3 on line 7, the word "amount" should be deleted. The Examiner also indicates that in claim 7 on line 2, the word "edge" should be deleted, and in claim 13 on line 7, the phrase "an phase" should be replaced by the phrase "a phase." Applicants have amended claims 1, 3, 7 and 13 in accordance with the Examiner's suggestions. Therefore, Applicants respectfully request the Examiner withdraw the objections to claims 1, 3, 7 and 13.

In the Office Action mailed April 26, 2004, the Examiner also rejected claim 4 under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner indicates there is insufficient antecedent basis for the limitation "said change state." Applicants have amended claim 1, such that amended claim 1 recites "a phase

error detecting part detecting a phase error amount of a clock based on a change state."

Claim 4 depends from claim 1, and as such, the limitation "said change state" now has antecedent basis. Therefore, Applicants respectfully request that the Examiner withdraw the indefiniteness rejection to claim 4.

**CONCLUSION**

Applicants respectfully submit that the above-captioned patent application is in condition for allowance, and such action is earnestly solicited. If the Examiner believes that an in-person or telephonic interview with Applicants' representatives would expedite the prosecution of the above-captioned patent application, the Examiner is invited to contact the undersigned attorney of records. Applicants believe that no fees are due as a result of this response to the outstanding Office Action in the above-captioned patent application. Applicants believe that no fees are due as a result of this response to the outstanding Office Action in the above-captioned patent application. Nevertheless, in the event of any variance between the fees determined by Applicants and those determined by the U.S. Patent and Trademark Office, please charge any such variance to the undersigned's Deposit Account No. 01-2300.

Respectfully submitted,



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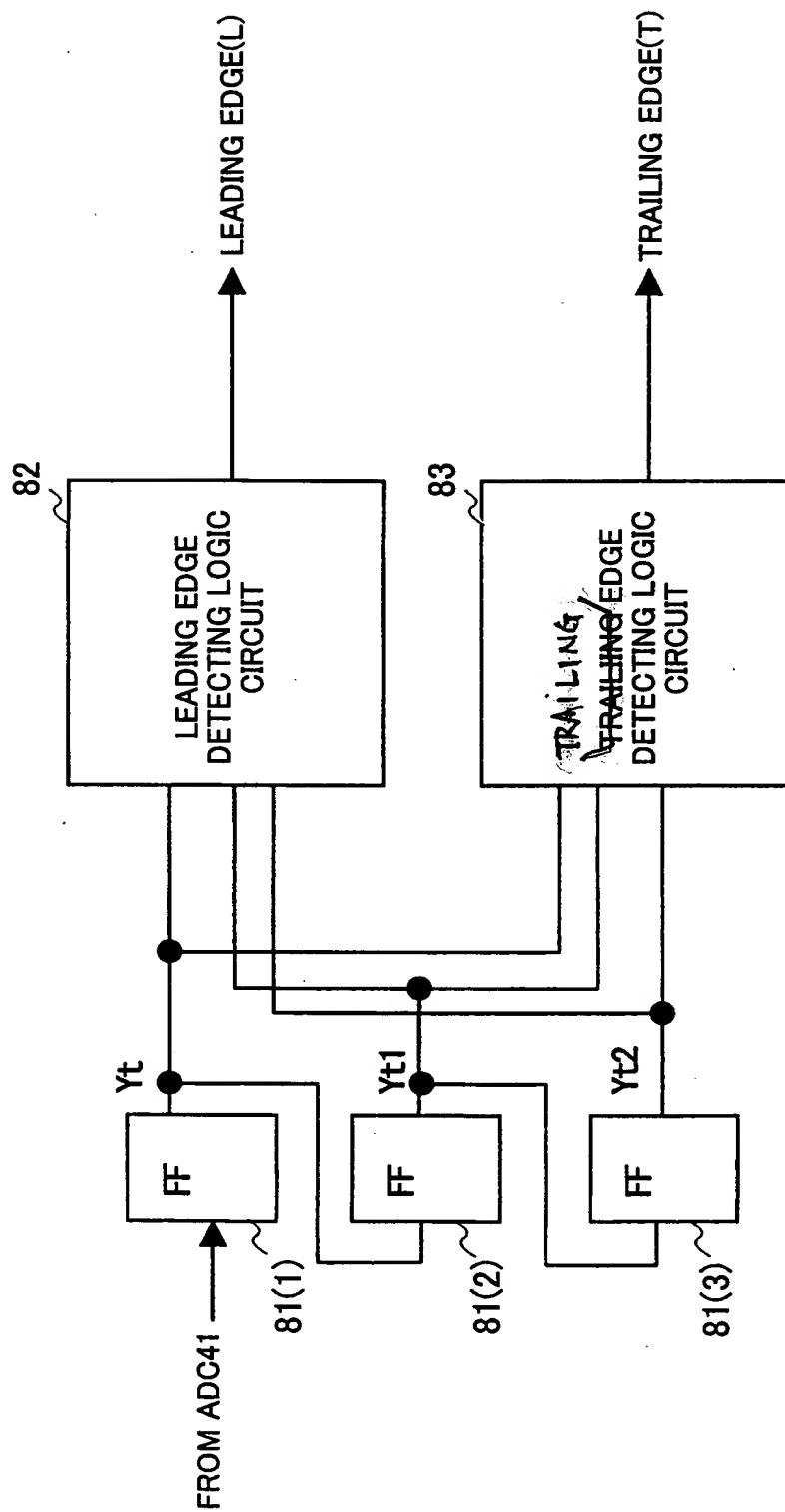
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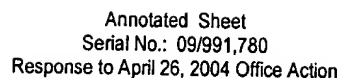
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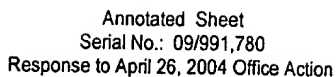
FIG. 7





The diagram illustrates a digital phase-locked loop (PLL) circuit. The main components and their interconnections are as follows:

- Input Data Path:** An input signal enters a **SUB-TRACTOR** (91), which then feeds into a **DIVIDER** (92).
- Edge Detection:** The output of the divider (92) is connected to an **EDGE CIRCUIT** (93).
- Feedback Loop:** The output of the edge circuit (93) is fed into an **ADDER** (94). The output of the adder (94) is connected to a **FF** (95), which then feeds back into the **ADDER** (94).
- Offset Amount:** An **OFFSET AMOUNT** (101) is provided as an input to a **SUB-TRACTOR** (100).
- Phase Error Switching Signal:** A **PHASE ERROR SWITCHING SIGNAL** (96) is fed into a **FF** (96). The output of this flip-flop is connected to an **AND** gate (98) and an **OR** gate (99).
- Logic Gates:** The output of the **AND** gate (98) is connected to the **OR** gate (99).
- Output:** The output of the **OR** gate (99) is connected to the **CLK** input of a **FF** (100).
- Final Output:** The output of the **FF** (100) is connected to the **SUB-TRACTOR** (100), which then feeds back into the **ADDER** (94).



**FIG. 13**

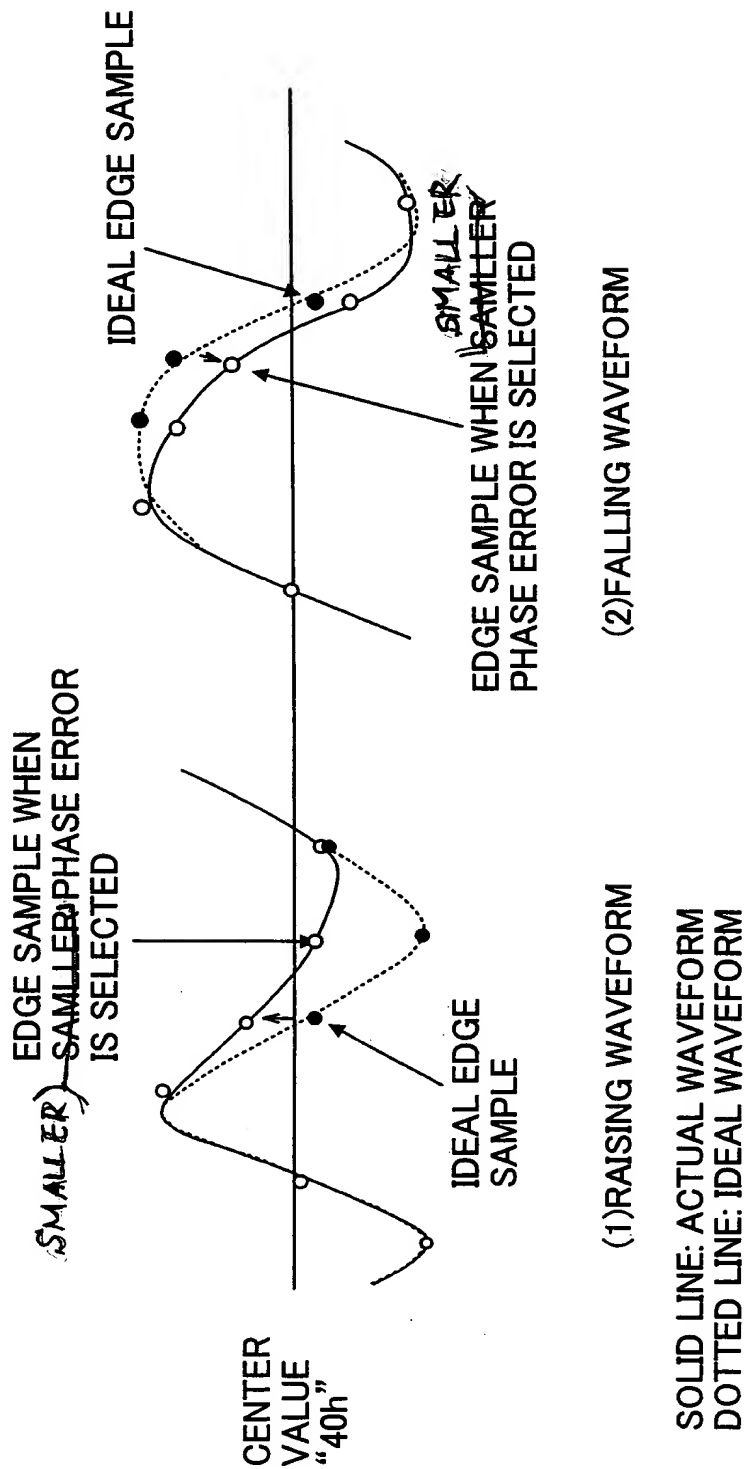




FIG.18

